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(54) Title: **HETEROGENISATION OF CATALYST COMPONENTS**

(57) Abstract: Provided is a method for the production of an olefin polymer, which method comprises polymerising an olefin monomer in the presence of a metallocene catalyst, which catalyst comprises one or more alkyl moieties having a terminal olefin group, and is selected from a catalyst of formula (I): $R''(CpR_p)XMQ_p$, wherein Cp is a substituted or unsubstituted cyclopentadienyl or fluorenyl ring; R'' is a structural bridge between Cp and X imparting stereoregidity to the component; each R is the same or different and is selected from a hydrocarbyl group having from 1-20 carbon atoms, a halogen, an alkoxy group, an alkoxyalkyl group, an alkylamino group or an alkylsilylo group; q is an integer from 0-8; X is a heteroatom from group VA or group VIA; M is a metal atom from group 11113, IVB, VB or VIB in any of its theoretical oxidation states; and each Q is a hydrocarbon having from 1-20 carbon atoms or is a halogen; p is an integer which is the oxidation state of M minus 2; wherein the alkyl moiety having a terminal olefin group is a substituent on R'', Cp and/or X; and from a catalysts of formula (II): $(L)_nM(Q)_p$, wherein L is an heteroatom -containing ligand; n is an integer of 1, 2, or 3; M is selected from Ti, Zr, Sc, V, Cr, Fe, Co, Ni, Pd, or a lanthanide metal; each Q is independently a hydrocarbon having 1-20 carbon atoms or a halogen; and p is the valence of M minus the sum of the coordination numbers of all L; wherein the alkyl moiety having a terminal olefin group is a substituent on L, and/or Q.

WO 2005/005494 A2